



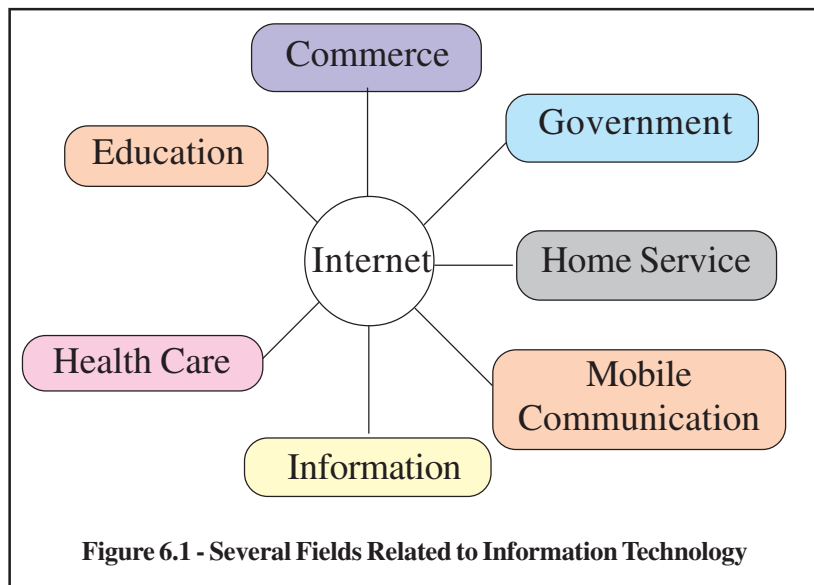
After studying this lesson, you will have better understanding on,

- Information Technology and the Society
- Usage of information Technology

The society has stepped into a digital era due to information technology and communication technology. The service rendered by computer technology, communication technology and information technology in fulfilling numerous needs of the society and providing required services by working hand in hand with the industrial sector and the manufacturers for more than half a century caused this change in the human society which dedicated itself in combining different sectors such as industrial, service supplying, communication, computer, media and recreational sector by using various tools is immensely benefited today. Though, at the beginning of the history, the computer was used only for converting data into information, today it has become a technological era in which the computer is used in fulfilling various needs of society in numerous ways.

Paying much attention on the concept of computer network in collaboration with the progress in the field of communication and using all these in (information technology) the computer has become an essential item in the present society.

At present, connecting computers or computer devices related to the field of communication and by that means maintaining relationships among human beings living all world over the has become an essential daily need. This relationship is being used now as Telecommuting, Teleconferencing, Telebanking, Teleshopping, Telemeding, TeleEducation, E-mail, E-voicemail, SMS etc.



6.1 Use of Information Technology in the Field of Agriculture

There is a close relationship between Information Technology and the field of Agriculture today. The internet is used in exchanging information related to the modern experiments done in agricultural sector. In spite of exchanging information among Scientists, by creating a connection between agricultural producers and the market, information related to fluctuating prices is exchanged immediately. Therefore Agricultural sector is protected from inconveniences caused by mismanagements in the markets. Specially the farmers engaged in Agriculture are able to do direct transactions with salesmen through internet. It helps to prevent the farmers being exploited by mediators and their agriproducts are sold at a proper price.

Examples :

- Usage of internet and e-mail for various agricultural activities.
- Exchange of climatic data essential for Agriculture.
- Exchange of details related to prices of agri-products.
- Creation of websites for exchanging information among scientists in the field of Agriculture.
- Computerising the reports on payments / expenditure regarding agriculture.

In addition, information technology can be immensely used in establishing Community Broadcasting Stations, Telecasting Stations as well as Community Service Centres. For example, the experimental project of Rays website Rays created by Kothmale Broadcasting Service can be sited.



6.2 Use of Information Technology in the Field of Industries

Computer technology as well as information technology is immensely used in the industrial sector. Making fundamental sketches / plans in creating various things and tools in the industrial sector, and previewing three dimensional pictures of products on computer before they are actually produced are done now. The objective is to create a preview of end product by inserting various colours based in a fundamental sketch / plan on the computer. For example industry of motor vehicles can be sited. In addition, the whole process of production can be regulated by using Robots controlled by computer systems and a flawless end product is assured.



6.3 Government Sector and exchanging Information

Use, exchange and promoting information related to government sector by people is an essential factor. Not only the government documents, common (General) data and information, newspapers, gazettes, laws (rules and regulations) legal and information notices, but the services with national value are also computerised. People will be greatly benefited by them. People can obtain needed information without visiting the government offices. Instead, many matters can be inquired through e-mail and other methods.

For example, State (Government) Information Centre established in Sri Lanka by now can be sited. Anybody can obtain information or advice by dialing the telephone number 1919. Information can be obtained through websites maintained by Government Departments Corporatons or Boards of Establishment. Usage of data systems for internal administrations of aforementioned institutes helps to increase the efficiency.



6.4 Information Technology and Business Community (Community of Entrepreneurs)

Information technology has invaded the field of businesses as in none other. Internet technology, which was not assisted by any entrepreneur long ago is mostly used by the business world at present. There is no other sector as business in which computer technology is used from the process of production upto purchasing.

Using internet for trade transaction has resulted great benefits not only economically but in administration also. One benefit is the possibility of importing goods from any country in the world after comparing the prices internationally and very often the possibility of purchasing goods at very low prices / costs. The website, www.amazon.com has become the largest market for books, newspapers, periodicals and magazines in the world. Hence, there is a shopping complex or a store named after 'Amazon' for that purpose. Moreover any producer can make their products open to the international market through his website.

Everybody has accepted that doing trade transaction through internet is the safest and the most convenient way. Since the internet market is open 24 hours throughout whole 7 days of the week and the year round, you can inquire about goods, exchange ideas and place orders for goods at any moment. Internet trading (internet shopping / e-shopping) is being popular day by day. You can compare prices of the goods ordered comparatively through internet, place orders on agreed prices and the possibility of paying via 'VISA / MASTER' cards.

Not only purchasing goods, but reserving flight tickets and hotels for your tours, sending presents to your friends and purchasing of clothing for daily needs also can be done conveniently. But the only thing you cannot do in this manner is to fit on and select suitable clothing.



6.5 Information Technology and The Field of Health



With the expansion of using computer technology, much attention has been paid from the beginning on using it in the field of health. Computer technology is specially used in numerous medical experiments and tests. Today the computer is used from the production of medicine upto medical tests and for surgeries too. A considerable role is played by the computer in decision making in the field of health. Several such occasions are mentioned below.



Magnetic Resonance Imaging (MRI) Scanner

'MRI' Scanner provides photographs of internal human organs taken at different dimensions which can be focused on a computer screen or provide in printed form. Its importance is that the doctors can take accurate decisions medically by using colour photographs of high quality provided by MRI scanner than X-Ray pictures provided using 'X-Ray' technology. The ability to take close-up pictures of internal organs when required is very important, This method is exclusively used in diagnosing the diseases related to sensitive body organs such as brain, heart and lungs.



Computer Axial Tomography (CAT) Scan

Three dimensional photographs using X-Ray technology are provided by the CAT scanner. This machine is very helpful in diagnosing the infections of internal body orgames. Though the machine has the possibility of getting magnified pictures to diagnose incurable / fatal diseases, it has not been much effective in diagnosing cancers at the initial stage.

It is important that this machine specially helps to diagnose infections caused in platelets and bone marrows. The photographs are created with a high quality and also with a use of more colours than of general usage in computers. Therefore it helps in identifying very fine and precise differences.





EEG Technology

EEG or Electroencephalograph is an often used technology. It is used to detect the malfunctions of brain. Functions of the brain are graphed electronically and the doctors are able to obtain information related to changes within a fraction of a second in a brain. Thereby, the doctors can diagnose fatal / serious conditions in the brain. EEG technology is used in observing changes in brain functions while sleeping, walking or when the patient is unconscious or in an emergency.



Telemedicine

Usage of Information technology in examining and observing the patients, maintaining medical reports by doctors is called 'Telemedicine'. Irrespective of the venue where the doctor and the patient are, communication between two aforementioned parties can (carry on) with the use of Internet or other nets. Thus the medical reports on different illnesses / sickness can be directed to the medical experts / consultants for further medical advice. This helps to preserve medical reports as well as provides the possibility of accessing them easily and conveniently when required. Not only it improves the efficiency of medical service, it helps to eliminate the difficulty of preserving medical reports for patients too.

Educational functions in the field of medicine and health, administrative functions as well as experimental functions and specially clinical functions can be performed successfully using 'Telemedicine'. Exchanging of above information can be done very quickly using e-mail. A close relationship can be built between the patient and the doctor using video electronic apparatus. Accordingly, the field of medicine has immensely benefited with the aid of pictures, animations moving figures as well as videos.

By today 'Telemedicine' has become the mostly used technology in the field of medicine. Therefore, it has been able to maintain the hygienic condition of patients at a satisfactory level as well as to exchange numerous types of medical facts. It has promoted high quality service in the field of medicine. The congestion in urban hospitals and clinics could be minimized because of the ability of examining and diagnosing the sicknesses in patients in regional hospitals by the consultants through 'Telemedicine'.

However, unsolved legal and practical problems related telemedicine are still remaining.



6.6 Using Information Technology in the field of Education



Stepping beyond the traditional school education, Information Technology has used in decentralising education and promoting more educational opportunities for the students. Education which was confined into the classroom so far; has been expanded due to the influence of computer and internet: When there is no facility to access internet, electronically compiled educational programmes can be made available to students via DVD or CD. Access can be made through LAN or Internet in facilitating education.

Education can be made available electronically through several ways.

1. Computer Based Training (CBT)
2. Web Based Training (WBT)
3. Learning Management System (LMS)
4. Distance Education System (DES)

The greatest advantage is that a large number of students are able to engage in education as they wish in getting education inside a classroom. Various problems arise related to space inside classroom and having to work according to a set timetable.

In getting education electronically, (through electronic media) the students can select courses or sections of courses as they wish and access them. Following the courses or sections of them according to given guidelines can be done by an accessor by being at a desirable place at a convenient time.

As the courses in the electronic education systems are designed using multimedia apporations, students can obtain great benefits out of them. The possibility of presenting many things which can't be expressed using words can be depicted through motion pictures, moving pictures or video using multi media technology at maximum level. These courses are now available in market in CD and DVD with which the students having no access to internet can be benefited.



Electronic educational management systems can be used in management activities from registration of new students upto the Final Examination. Self educational exercise as well as guidance in improving the competencies of students can be controlled and managed through such systems. Registered students can access their advisors via e-mail in solving their problems and they can have the facility of contacting other students registered under the same subjects when required.

These assesments are done in several ways as follows.

1. Pre-Assessments
2. Intermediate Testing
3. Final Evaluation Test

In addition, various types of reports are prepared at the end of the course. The main facilities available in these systems are as follows.

1. Pre-Assesstment
2. Real Time progress Tracking
3. Customisable Group Reports
4. Simple Global Deployment
5. Time Management
6. Robust Management

School data management systems are used worldwide at present; and their function have been greatly beneficial in school management. As examples, school data management systems can be used in performing below mentioned functions.

- ♣ Registration of students.
- ♣ Preparation of time table and engage teachers in the work accordingly.
- ♣ Management of data for directing teachers for relief work when some teachers are on leave.
- ♣ Preparation and computerizing the data on student attendance.
- ♣ Preparation and issuing of character certificates.
- ♣ Computerizing charges on courses and other activities involved in school management.

The best example which can be cited is the school network system called "School Net" which is actively in Sri Lanka at present.